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## Unemployment and separation: Evidence from five European countries

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### Abstract

Since the 1970s, several European countries have experienced high union dissolution risk as well as high unemployment rates. The extent to which adverse economic conditions are associated with union instability is still unknown. This study explores the relationship between both individual and aggregate unemployment and union dissolution risk in five European countries before the recent economic crisis. Using rich longitudinal data from Belgium, Finland, France, Germany, and Italy, the empirical analysis, based on discrete-time event history models, shows that male unemployment consistently increases the risk of union dissolution. While a strong association is observed between male unemployment and separation at the micro level, no association is found between male unemployment and union dissolution at the macro level. The results for female unemployment are mixed, and the size of the impact of female unemployment is smaller in magnitude than that of male unemployment. In Germany and Italy, where until very recently work has been less compatible with family life than in other countries, female unemployment is not significantly associated with union dissolution.

**Key words:** unemployment, divorce, separation, contextual effect, gender, couple, crisis



## 1. Introduction

With the recent economic crisis, renewed research interest in the effect of economic conditions on demographic behaviour has been observed. The effect of unemployment on union formation (de Lange et al. 2014; Vergauwen et al. 2016) and fertility dynamics (Kravdal 2002; Kreyenfeld & Andersson 2014; Pailhé and Solaz 2012; Schmitt 2012) has been extensively studied. Less attention, however, has been devoted to the impact of unemployment on the stability of cohabitating unions and marriages.

Micro-level research has consistently shown that individual job loss or unemployment, such as other indicators of an adverse economic situation, is associated with a higher risk of separation and divorce. Involuntary job loss may be seen as an ‘unexpected’ event that affects income and has negative consequences on union stability (Boheim and Ermisch 2001; Charles and Stephens 2004; Weiss & Willis 1997). At the individual level, job loss generally reduces financial resources as lost earnings are only partially offset by unemployment benefits. Unemployment increases uncertainty about future earnings and career prospects. Unemployment is also associated with poor physical and mental health, such as the elevated risk of depression, distress, and interpersonal tensions (Doodley et al. 1994, 1996; Norström 2014), even though establishing the direction of causality is not straightforward (Charles & Stephens 2004). Overall, the results of previous studies indicate that the financial and emotional consequences of unemployment are likely to negatively affect partnership stability. Different indicators of unemployment (such as unemployment exposure, unemployment duration, plant closure, and income loss) have revealed a negative relationship between male unemployment and marital stability (Jensen and Smith 1990; Kraft 2001; Rege et al. 2007; Yeung & Hofferth 1998). The results for female unemployment are generally mixed and depend on how each country supports the integration of women with children into the labour market. In Nordic states, where female employment is high, Jalovaara (2001) and Hansen (2005) have reported a negative effect of female unemployment on union stability based on recent register data, while the effect is often not significant in other contexts. These findings suggest a recent convergence of male and female unemployment on union dissolution, at least in countries where the dual-earner model dominates.

Surprisingly, macro-level evidence suggests a positive relationship between unemployment and marital stability has been often observed. Divorce rates have been found to be lower during an economic crisis or an economic downturn in the US (Amato & Beattie 2011; Hellerstein & Morrill 2011; Schaller 2010) and, recently, in Europe (González-Val & Marcén 2017). This micro-macro paradox (Fisher & Liefbroer 2006) calls for further investigation, with the inclusion of individual as well as aggregate measures of economic uncertainty into the micro-level analysis of separation and divorce behaviour.

A cross-national comparison of separation behaviour in Europe offers an excellent opportunity to expand knowledge in this field. Before the recent financial crisis, many European countries experienced diverse levels and substantial fluctuations in unemployment rates. Since the 1970s, unemployment rates have exceeded the ten-per-cent-threshold in several European countries. At the same time, welfare states have taken different turns in their family policies. Some countries, such as Belgium, Finland, and France, have expanded ‘public daycare’ and enabled mothers to better combine work and

life. In these countries, women's employment and integration into the labour market have become an economic foundation of the family (Kotowska et al. 2010). In other countries, such as Germany and Italy, family policies have been slower in catching up with the needs of the dual-earner families. In these countries, women often withdraw from the labour market after childbirth, and they only marginally contribute to the family income with their earnings.

This study draws on rich longitudinal data from Belgium (Flanders), Finland, France, Germany, and Italy to investigate the effect of individual and macro-level female and male unemployment on union dissolution risks. The contribution of this study is twofold. First, we provide solid estimates of the association between unemployment and separation for men and women in countries that differ significantly in the way they integrate women into the labour market. Using a five-country comparison approach, we show how the welfare state context moderates the relationship between female unemployment and union dissolution. Second, we consider macro and micro economic unemployment at the same time. In doing so, we address the puzzle that shows a negative correlation between union dissolution and unemployment at the macro level and a positive correlation at the micro level.

However, several caveats of the present investigation must be mentioned. Most importantly, this study relies on different data sources. We have fully harmonised the variables and modelling strategies across data sets. We have also used the most recent data that cover behaviour up to the Great Recession. However, differences in the types of data used and time frames analysed persist, which limit the comparability of the results across countries. By conducting a comparison between five countries, we complement the findings of prior single-country studies, but the scope to unambiguously relate the welfare state context and behaviour remains limited. Finally, the proposed approach provides robust results regarding the association between macro and micro level unemployment and union instability. We control in the regression model for important confounders; however, we do not aim at establishing causal relationships, which should more rigorously account for the selection into unemployment.

## 2. Institutional context

### 2.1 *Welfare state regimes and women's integration into the labour market*

We selected five Western European countries to analyse the relationship between unemployment and separation: Belgium, Finland, France, Germany, and Italy. These countries radically differ in how they have supported the integration of women with children in the labour market in recent decades.

Germany is commonly classified as the archetype of a male breadwinner regime (Esping-Andersen 2009). Until recently, work and family life were barely compatible as childcare for children below age three was strongly rationed. Only about three per cent of children below age three in West Germany attended day care in 2002 (Kreyenfeld & Konietzka 2017). For older children, only part-time care was available. Although women's

employment rates have increased substantially in recent decades, mothers mostly worked part-time or in marginal employment (so-called ‘mini’ or ‘midi jobs’). The system of income splitting, combined with a progressive tax schedule, reduced the incentives for married women to be employed. Women in East Germany have always enjoyed better compatibility of work and family life and displayed higher full-time employment rates than their West German counterparts. Since 2005, many changes (the expansion of public day care for children below age three and the introduction of a ‘Swedish-style’ parental leave system) have led to an increase in mothers’ full-time employment rates (Geyer et al. 2015). However, the West German men and women who participated in the present investigation have not benefited from these new regimes and rather experienced Germany as a conservative breadwinner model.

The Italian welfare system is based on the so-called ‘familism by default’, which leaves the responsibility of providing care to dependent members largely to families, and, above all, to women (Bordone et al. 2016; Saraceno 2010; Saraceno & Keck 2010). Italy is characterised by a scarce availability of formal childcare services (Del Boca et al. 2005). In this context, although an increase in the labour market participation of women has been experienced, the female employment rate is still relatively low (Vignoli et al. 2012).

Finland is a gender-egalitarian Nordic welfare state where women’s and men’s employment rates are similar, and both tend to work full time. However, women enjoy extended family leave when they have young children. The family leave system offers maternity, paternity, and parental leave, as well as cash-for-care benefit, thus supporting the home care of children under three years of age and often their older siblings.

France is considered a family-friendly country with a quite generous family policy (Toulemon et al. 2008) that provides both subsidised childcare of different types (creches or subsidised nanny) and a low-paid parental leave system until the child is age three. Free school with extended hours allow many mothers of young children to work when the child is older than three (Le Bouteillec et al. 2014). Mother’s employment rate is high.

Belgium has an elaborate work-life balance system in which employees can take extensive career breaks and childcare leave (12 weeks full paid leave at the time of observation, 16 weeks with the current legislation) (Fuselier & Mortelmans 2019). Formal (creche) and informal (care at home) childcare facilities are widely available even though pricing hinders accessibility in some cases. Kindergarten is available for free from the age of three.

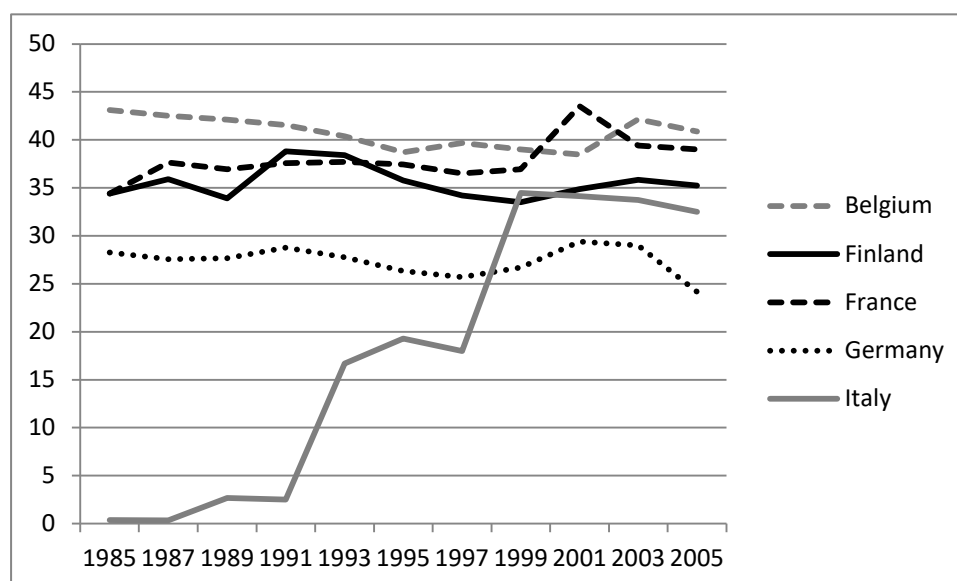
## 2.2 *Welfare state regimes and compensation of unemployment*

The differences in how welfare states enable women to participate in the labour market are expected to have a pervasive influence on whether female unemployment influences union stability. Beyond differences in the integration of women into the labour market, welfare states also differ in the way in which they compensate for the loss of income during unemployment.

The five countries under analysis have very similar systems in place. In all countries, unemployment is covered by unemployment insurance for people who have worked for a sufficiently long period and by minimum welfare benefits otherwise. The unemployed receive benefits for a fixed period. The legislation on the receipt of unemployment

benefits is country-specific and may vary within a country depending on the employment sector or the beneficiary's age, for instance.

Figure 1: Gross replacement rates during unemployment



Source: OECD, Benefits and Wages: Statistics, <http://www.oecd.org/els/benefits-and-wages-statistics.htm>

Figure 1 shows the gross replacement rate expressed as a percentage of previous earnings based on OECD-data.<sup>1</sup> The figure shows that coverage levels are very similar in the country under analysis, except Italy, which has seen substantial changes in the benefit schemes in recent decades. Italy has only recently reached the average levels observed in other countries in the late 1990s. The replacement rate was almost zero in the 1980s and started to increase during the 1990s. Belgium and France have the most generous unemployment insurance, with a gross replacement rate of around 40%, followed by Finland at 35%. In Belgium, the unemployment benefit also depends on the family situation of the unemployed person. For instance, it is higher for a single than for an individual in a relationship with a working partner. In Germany, the replacement rate is below 30% and decreased with the Hartz IV reform in 2005. These figures are only average levels, and both the amount and the duration of benefit entitlement differ considerably according to previous earnings, work history, and additional welfare benefits. In 2012, the maximum duration of unemployment benefits (for a 40-year-old worker with

<sup>1</sup> The OECD summary measure is defined as the average of the gross unemployment benefit replacement rates for two earnings levels, three family situations, and three durations of unemployment. For further details, see Martin (1996).

22 years of contributions and continuous employment since age 18, OECD 2015<sup>2</sup>) was the highest in Belgium (unlimited), around two years in France and Finland, and lower in Germany (12 months) and Italy (eight months).

Overall, the differences in benefits schemes across countries are small, so that the differences in unemployment compensation and the duration of unemployment benefits should not severely distort the country comparison. An exception is Italy, where unemployment compensation rates were very modest before the 1990s.

### 3. Theoretical background and research hypotheses

#### 3.1 *Economic and psychological consequences of individual unemployment*

At the individual level, employment requires time and effort but guarantees income and social status. Unemployment, on the contrary, generally leads to a loss of the social status associated with paid work, and a negative income shock as labour income<sup>3</sup> falls to zero and is only partly offset by unemployment benefits. The loss of income, often unanticipated, may be associated with greater union instability for several reasons (Jensen & Smith 1990; Weiss & Willis 1997). The drop in household income may result in conflicts between partners over financial matters and the now more limited resources. Unemployment may also result in poverty and contribute to increasing worries and distress about the future financial situation of the household and the future working career of the affected household member. Beyond these financial matters, Kraft (2001) pointed out that male unemployed may be furthermore distressed by the fear of being unable to live up to their partner's expectations of being the provider of the family. Moreover, a job loss often involves a devalued social status, potentially leading to a loss of self-esteem, fewer contacts with colleagues and friends, and psychological stress, which might result in depression or alcohol abuse with adverse effects on health (Hansen 2005). Studies have emphasised how unemployment is associated with a severe deterioration in individual psychological well-being (Winkelmann and Winkelmann 1998). Thus, unemployment may accentuate or create new relationship problems within a partnership due to the psychological stress, health impairments, and the deteriorated well-being associated with the loss of income and social status. *Against this background, we assume that the loss in income and social status associated with unemployment increases the stress in a relationship, which, in turn, results into higher union dissolution risk (Hypothesis 1a).*

Conversely, unemployed individuals may have more free time to spend with their partner or children. Partners may enjoy more leisure together, albeit those leisure activities may be limited by the financial situation. The additional leisure may increase union stability. A partner's job loss could also lead to a new household organization of tasks and the time available for housework and childcare. Most studies showed that the

2 OECD (2015), Graph 3.3. Maximum duration of unemployment benefits in OECD countries (2012) in Back to Work: Japan, OECD Publishing, Paris. doi:10.1787/9789264227200-graph35-en

3 In addition, wages, bonuses and work-related benefits, such as health insurance, in some countries are lost.

time allocated to childcare and housework increases after falling into unemployment; however, the magnitude of the effect is rather small in the case of men (Gough & Killewald 2011; Solaz 2005; van der Lippe et al. 2018). Other arguments that speak for a stabilising effect of unemployment are the « partner commitment » and social pressure. A partnership may be viewed as a way to smooth the adverse effects of unemployment through risk-sharing and pooling of the couple's resources. In response to the loss of income when one partner becomes unemployed, partners may strengthen their relationship and increase their resilience (Wilcox 2011). The employed partner may also be reluctant to leave a partner in need. Such barriers to leaving a union may stem from religious or other social norms, from fear of the disapproval of family and friends, or the presence of children (Kraft 2001). The alternative hypothesis to the 'stress hypothesis' (hypothesis 1a) is, thus, to assume that *unemployment leads to greater union commitment, which results in higher union stability (Hypothesis 1b)*.

### 3.2 *The welfare state context and female and male unemployment*

Several prior studies showed that male unemployment is associated with a higher risk of separation than women's unemployment (Lewin 2005; Sayer et al. 2011). A man's labour income is generally higher than a woman's, on average; hence, we expect the loss of income after a job loss to be higher for men than women, and the destabilising effect of unemployment to be more substantial for men than women for this reason. The social status effect is also expected to be greater for men, who are often considered as the main provider of resources within the couple, than for women, whose job is still often viewed as secondary. With respect to the division of housework, we can expect a push towards a more unequal division of work in the case of female unemployment and a more equal division in the case of male unemployment. Tensions around the division of tasks increase when women start working (Amato 2010) and, thus, they should diminish in the case of female unemployment, as the risk of divorce. Unemployment may reduce women's dual burden of paid and unpaid work. We do not expect such a stabilising effect in the case of men's unemployment as their involvement in housework when unemployed remains quite limited (Solaz 2005). Furthermore, the reversal of gender roles when a man is unemployed and a woman still working can be badly lived. Thus, for all these reasons, unemployment may be considered as 'more acceptable' for women due to the traditional gendered division of work (Ström 2003). *We stipulate that the effect size for men's unemployment on union dissolution is larger than for women's unemployment (Hypothesis 2).*

One would assume large differences across welfare state regimes in the association between female unemployment and union dissolution risks. In France, Belgium, and Finland, where the dual-earner carer model is the dominant arrangement, the job loss of any partner, regardless of gender, is expected to be less detrimental for the household income because the unemployed person can still benefit, in most cases, from his/her partner's income, assuming that household resources are shared. In countries such as Italy and Germany, where the male breadwinner model still prevails, the loss of the unique family source of income represents a more severe problem, and being unemployed for the breadwinner is often socially disapproved. *Against this background, we assume that male unemployment is more detrimental for the couple than female unemployment*



*in a breadwinner model country, and the unemployment effect is more similar between sexes in countries in which a dual-earner model prevails (Hypothesis 3).*

### 3.3 Macro-effects of unemployment on union dissolution

Unemployment is also linked to separation and divorce at the macro level since not only the unemployed are affected by the change in the economic situation. In periods of recession, employed people might also be concerned because they are worried and/or pessimistic about their future or that of their children. Economic hardship during a recession generates stress. These negative views and feelings can affect the quality of the partnership. *For this reason, we expect to observe a higher divorce risk during economic downturns (Hypothesis 4a).*

However, since the decision to separate takes time, the positive association between divorce risk and economic downturns is likely to be stronger some years after the onset of the economic downturn. For the US, Amato and Beattie (2011) found a stronger association between divorce and unemployment when the unemployment rate is lagged. Furthermore, couples pool resources and risks during an economic downturn. During a recession, they may evaluate these benefits more strongly and rather refrain or postpone a separation or divorce. People may also postpone a union dissolution until they can afford the legal separation procedure. Based on US data, Amato and Beattie (2011) found that divorce and unemployment rates were initially positively associated, but their association has become negative since the 1980s. This result was also confirmed by Cohen (2014), who found a temporary decrease in divorce during the Great recession<sup>4</sup> that ended in 2011. The interpretation of this reversal is linked to the above-mentioned delay but also to the cost of divorce, which has increased in recent decades.

Studies on aggregate unemployment and divorce in Europe are still very rare. The situation in Europe is potentially different from the US because of better welfare protection, which can both attenuate the financial loss after unemployment and the cost of divorce. However, a recent study by González-Val and Marcén (2017) on 29 European countries also showed a small but significant negative relationship between divorce and national unemployment rates, which is robust to different specifications. *Against this background, we expect to observe a lower divorce risk during economic downturns (Hypothesis 4b).*

### 3.4 Micro-macro interaction effects of unemployment on union dissolutions

Beyond the above-mentioned mechanisms, individual unemployment may operate differently according to the economic conditions at the macro level of society. Two counteracting forces may be at play. Being unemployed during an economic downturn is associated with low chances of finding new employment. This circumstance may reinforce the negative effects of unemployment on union stability because of greater

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<sup>4</sup> Their results refer to the national level but are not observed at the state level. This suggests that economic conditions may have heterogeneous effects.

uncertainty about future career perspectives. Thus, we hypothesise that *unemployment during a recession is particularly detrimental for union stability (Hypothesis 5a)*.

However, Brandt (2015) argued that this view does not sufficiently consider the ‘selectivity’ of people who become unemployed during economic down-turns. She argues that unemployment is a stigmatising event because of the loss of both the job and the associated social status, but this stigma is less severe during an economic down-turn because unemployment is then a collective fate and not necessarily considered as individual failure. For the same reasons, the partner will have less of a degraded image of his or her unemployed spouse during recession than during growth. Thus, the resilience to unemployment shock may also be stronger during economic crisis, and the risk sharing within couple may play a larger role. Following these arguments regarding the lower social stigmatisation and the slightest devaluation in the eyes of the partner of unemployed, one would rather hypothesise that *unemployment during a recession is less detrimental for union stability than in an economic upswing (Hypothesis 5b)*.

## 4. Data, sample, and models

### 4.1 Data

For each country, we used the most appropriate longitudinal data available to link the economic situation and the partnership history.<sup>5</sup> Three retrospective surveys were used: the Divorce in Flanders survey (2008) for Belgium (Flanders region), the Family and Employers survey (2004–2005) for France, and the Family and Social Subjects survey (2009) for Italy. These surveys contain precise retrospective occupational, marital, and fertility histories and separation dates recorded every year for individuals from age 18 onwards. For Germany, we used data from the German Socio-Economic Panel (GSOEP), a panel study that includes both retrospective and prospective data obtained from yearly interviews of households conducted from 1984 onwards. Formation and dissolution of unions were deduced by comparing the household composition between two consecutive waves. We assumed that a union was dissolved if the respondent lived with a partner at time  $t$ , but not at time  $t+1$ . We only included those who started a new union after entry into the panel to observe them throughout the entire relationship. For Finland, the register data were best suited to the study’s needs. Registers of non-marital unions and marriages are available from 1990 onwards.

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5 Another solution would have been to use a survey performed in all the five countries. However, the available surveys have several drawbacks. The Generations and Gender Survey (GGS) provides panel data but only for a limited number of countries. Since the GGS has only retrospective employment histories available in the second wave, only a few countries could have been included in the analysis. In addition, panel attrition was very high in some countries, notably Germany. The attrition in the yearly EU-SILC panel is limited, but couples are only observed for four years, during which the number of separations observed per country is very limited. For these reasons, we decided to combine the most suitable national data sources in this study despite their differences.

Despite their very different nature (retrospective data for Belgium, France, and Italy, panel data for Germany, and register data for Finland), all data sources provide comparable information. The current employment situation and unemployment spells are observed yearly (or even over shorter periods) from union formation until separation, or until the last date of the survey or last year of register data in the case of censoring.

Table 1 summarizes, for each country, information regarding the type of source, the sample specificity, and the sample size.

*Table 1:* Description of data sources

	Data (year)	Type	Observations (subjects)	Separations	Sample specificity
Belgium (Flanders)	Divorce in Flanders (2008)	Retrospective survey	M: 45,365 (1,909) F: 51,808 (2,469)	410 488	First marriages only
Finland	Family Dynamics in Finland (1990-2012)	Register data	M: 2,404,777 (197,437) F: 2,477,444 (198,681)	70,675 78,104	Couples formed from 1990
France	Familles et Employeurs (2004-5)	Retrospective survey	M: 19,658 (4,477) F: 63,110 (4,889)	1,301 1,389	All couples
Germany	German Socio-Economic Panel (1984-2014)	Panel survey	M: 19,881 (2,780) F: 20,691 (3,112)	1,172 1,526	Couples formed after entry into the panel study
Italy	Family and Social Subjects Survey (2009)	Retrospective survey	M: 135,752 (8,539) F: 141,37 (8,823)	1,202 1,169	All couples

## 4.2 Sample

Creating a homogenous and comparable sample of unions in each country is a challenge and was done with great care. In each country, we selected all unions. Most of the partnerships in our data were formed in 80's and 90's. The union order (first or higher-order union) was then controlled for. A couple relationship is defined as a marital or non-marital union that lasted at least one year. A union is considered dissolved on the date when the partners stop living together, rather than on the date of the legal divorce, which may sometimes occur several years later (depending on the country's legislative framework). Censoring occurs at the date of (last) interview (for Finland: at the date the register was drawn). All analyses were conducted separately for women and men.

Unfortunately, in some countries, information on unmarried couples was not available for the entire period. Thus, for Finland, to include non-marital unions, only unions that started from 1990 onwards were examined. For Belgium (Flanders), only first marriages are recorded in the survey data, but lasting non-marital partnerships are rather scarce in Flanders, which justifies the focus on marriages and suggest this as a non-

substantial drawback. However, these differences need to be accounted for when interpreting the results of this study. We also provide a robustness check on a smaller and selected sample, common to five countries: the married unions formed in the 1990s (see Appendix).

### 4.3 Research strategy

We used discrete-time event history models (logistic models) to address union duration with a polynomial functional form for the baseline hazard (union duration and union duration squared), and we controlled for a range of covariates. Time-varying covariates are indicated by *TV*. We introduced the union cohort and the union order, the union type—whether married or not (*TV*), age at union formation, educational level, number of children (*TV*), the presence of a child under three years old (*TV*), and the region (when spatial heterogeneity is sufficiently high within the country, such as in Italy and Germany). The variables of interest are the individual employment situation and, specifically, the unemployed status, the national yearly unemployment rate by age and sex in the period, and the interaction between the national unemployment rate and individual unemployment (all of which are time-varying). All *TV* covariates are lagged by one year to take into account possible delayed effects and reduce potential reverse causality effects.

The national unemployment rate differs by sex, age/region,<sup>6</sup> and year to allow sufficient variability. For ease of interpretation, we employed a dummy indicator for whether individual unemployment occurs during periods of high or low unemployment. We opted for a country-specific definition for these periods. We calculated the median of the unemployment rate in the observed period and created a variable for whether a person is unemployed during a recession (the unemployment rate is at or above the median) or during a period of growth (the unemployment rate is below the median), still controlling for the macro effect (continuous unemployment rate). As the yearly unemployment rate by age is not defined at the individual level, standard errors are corrected by a clustering method for this level of observation (years and age).

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<sup>6</sup> A substantial South-North divide is observed in Italy. For this reason, we did not use the national unemployment rates, but the unemployment rate is broken down by geographical area (North-East, North-West, Centre and South). In Germany, economic development differs greatly between eastern and western regions. Unfortunately, for Germany, only the unemployment rate by region (East/West) and sex, but not by age, sex, and region was available from the Institute for Employment Research (IAB). We kept regional variability by losing age variability.

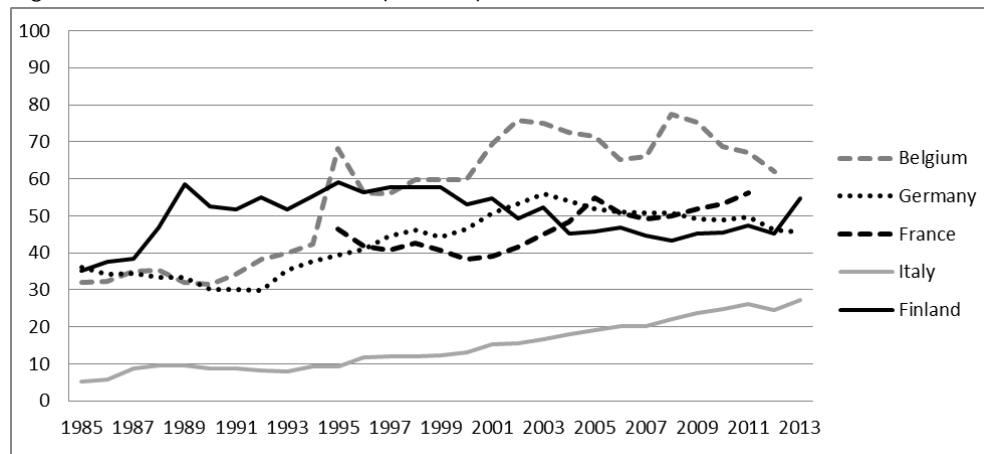
## 5. Results

In this section, we first display divorce and unemployment trends at the aggregate level in each country. Then, the model that analyses the effects of individual unemployment during the union and the impact of aggregate unemployment on dissolution risk is presented. Last, we present the results from the model that includes interaction terms.

### 5.1 Aggregate level trends

In all countries considered in this study, the divorce rate (Figure 2) and the risk of dissolution of unmarried partnerships (not shown) have constantly and quite gradually risen over time. The sudden breaks in these rates are due to changes in the divorce legislation (in 2005 in France, in 1994 and 2007 in Belgium, and in 1988 in Finland). More recently, a levelling-off of divorce rates has been observed due to both a decrease in the number of married couples and a slow decline in divorce risk in some countries. Italy continues to be an outlier, with a sharply increasing divorce rate but a much lower divorce risk than in the other countries. In Italy, the civil dissolution of marriages has a shorter history (Todesco, 2008) as divorce was only legalised in 1970. Initially, a request for divorce could be made after five years of legal separation, but in 1987, a new law reduced this period from five to three years. In addition, not all legal separations are converted into a divorce.<sup>7</sup>

Figure 2: Crude divorce rates by country 1986-2014

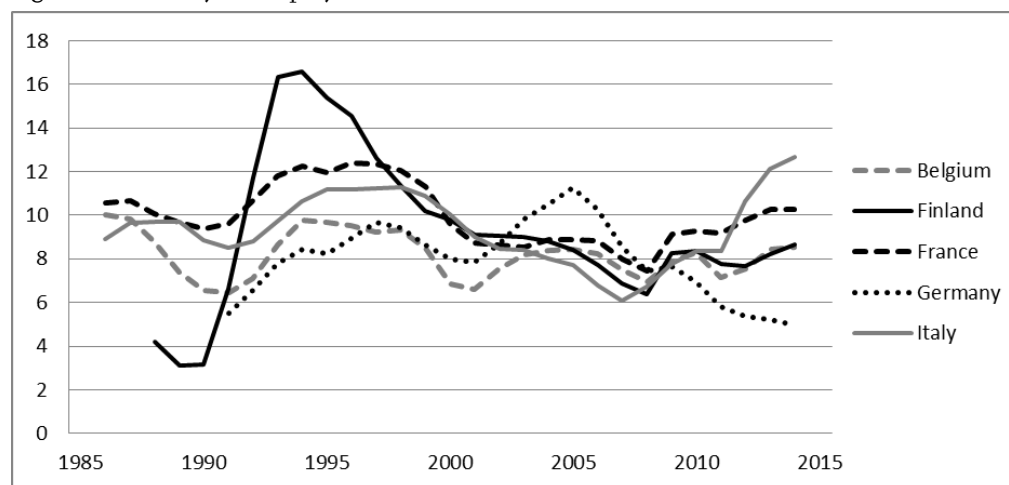


Source: Eurostat. Number of divorces in the year per 100 marriages. For Germany, former territory of the FRG until 1990.

<sup>7</sup> Only half (51%) of the total number of separations granted in 1995 had been converted into divorce by the year 2002. It should also be noted that two new recent laws (law no. 132/2014 and law no.107/2015) simplified divorce procedures, leading to a considerable increase in the number of divorces in 2015.

The yearly unemployment rate (Figure 3) was quite high during the 1990s, especially in Finland, where the recession was very deep for two primary reasons. First, economic policy in the 1980s had led to an economic boom and an overheating of the economy, followed by a corrective contraction in the early 1990s. Secondly, the Soviet Union had been one of Finland's main foreign trading partners, and its collapse further accentuated the crisis. For all countries except Germany, we observe a decreasing trend at the end of the 1990s and an upturn with the recent crisis starting in 2008 in all countries.

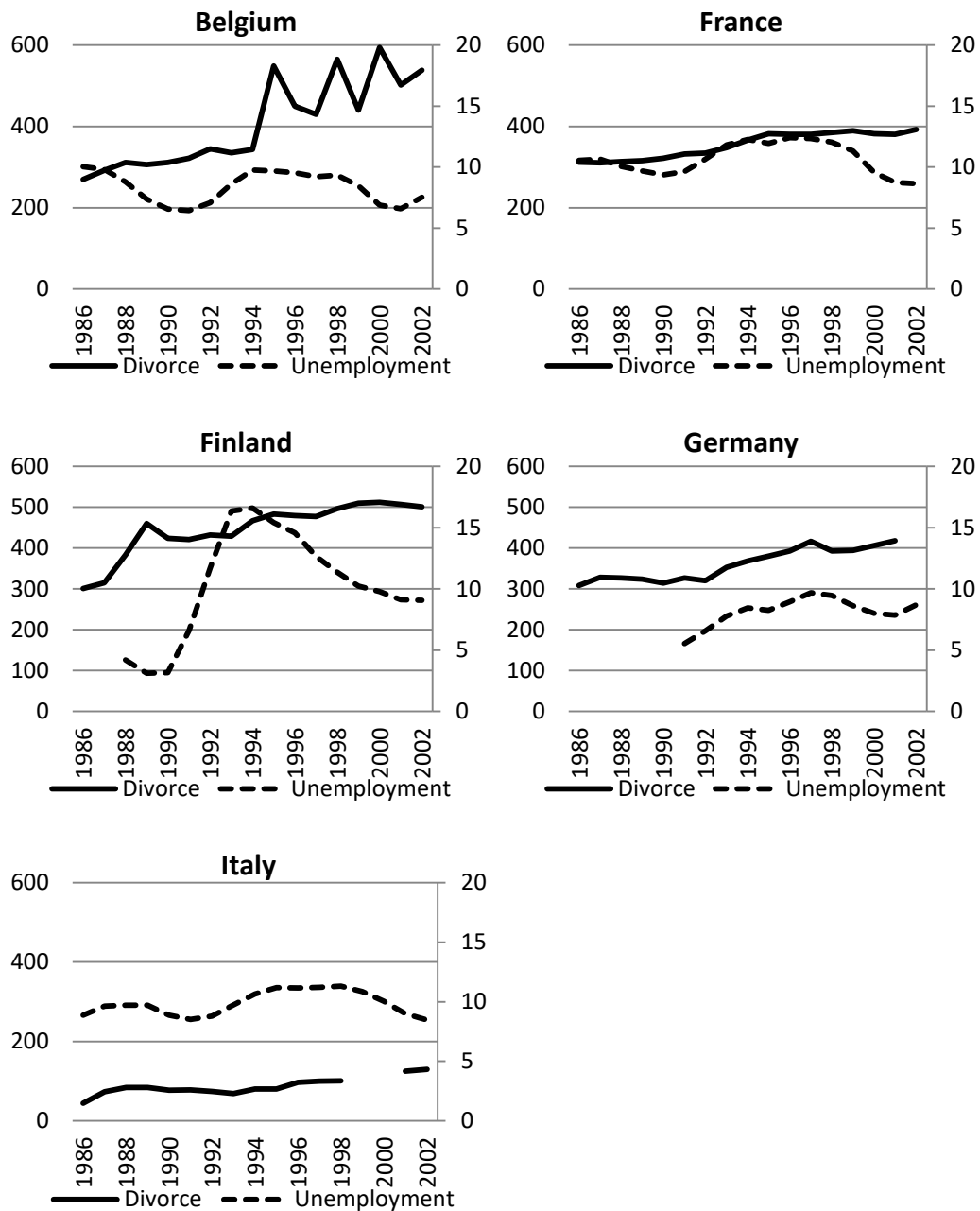
Figure 3: Yearly unemployment rate 1986-2014



Source: Yearly unemployment rate (OECD database Labour Force statistics, <http://stats.oecd.org/>)

Figure 4 investigates a possible correlation between these trends in each country. Italy and Germany show a counter-cyclical trend of divorce and economic growth. Both countries have in common that they used to require a long separation period between separation and the legal divorce. This result implies that the divorce rate increases when the unemployment rate increases, whereas in other countries, such as France and Belgium (and Finland but to a lesser extent), there seems to be a reverse relationship: an increase in unemployment rate coincides with a decrease or slowdown in divorce rates. These associations might be spurious and connected to country-specific features of the economic situation, such as the labour market conditions, or the divorce legislation.

Figure 4: Macroeconomic trends in unemployment and crude divorce rates by country



Sources: Yearly unemployment rate (OECD database Labour Force statistics, <http://stats.oecd.org/>), Divorce index (Ined database, Developed Countries Demography, [https://www.ined.fr/en/everything\\_about\\_population/data/online-databases/developed-countries-database/](https://www.ined.fr/en/everything_about_population/data/online-databases/developed-countries-database/))

## 5.2 Regression results

### 5.2.1 Individual unemployment

The results from the discrete model are presented in Table 2. The predicted probabilities from the model are also presented to compare the magnitude of the effects across countries (Figure 5). We had previously formulated competing hypotheses on the effect of unemployment on separation. We contrasted a ‘stress hypothesis’, which stated that being unemployed resulted in an increase in separation rates (hypothesis 1a), with a ‘commitment hypothesis’ (hypothesis 1b), which stated the reverse relationship.

*Table 2:* Individual and macro-economic effects of unemployment for men (M) and women (F), discrete-time models on the dissolution risk, odds ratios

	Flanders (BE)		Finland		France		Germany		Italy	
	M	F	M	F	M	F	M	F	M	F
Individual	2.57***	1.03	1.68***	1.33***	1.51***	1.39***	1.72***	1.28*	1.65*** <sup>a</sup>	0.85*** <sup>a</sup>
Aggregate	1.00	0.97***	1.01	1.01	1.03**	1.00	0.88***	0.96**	1.01	1.02***

Discrete time event history models controlled for union duration and duration squared, union cohort, union order, union type (married or not), age at union formation, educational level, number of children, presence of a child under three, and region (if necessary). The full model results are reported in the Appendix (Tables A1 to A5). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

<sup>a</sup> for Italy, the data do not allow to disentangle unemployment from inactivity at the micro level.

The results for men are very consistent and show that being unemployed substantially increases the probability of separation in all countries, supporting the ‘stress hypothesis’. For women, the results are more mixed. The union dissolution risk for unemployed women is higher than for employed women but only statistically significant in Finland and France and always of smaller magnitude than that for men. Women’s unemployment has no significant effect in Belgium<sup>8</sup> and only a weak effect in Germany. In Italy, since unemployment could not be distinguished from inactivity, the result is not fully comparable with the other countries. Women’s non-employment (i.e., either unemployed or inactive) reduces the risk of marital dissolution in Italy. This could mean that the financial autonomy of a woman is important to begin the process and bear a separation in Italy.

These results suggest that men’s unemployment continues to have a stronger effect on separation risk than women’s unemployment in all countries under analysis. This result is consistent with the idea that employment status continues to play a more significant role for men than for women, in line with this study’s expectations (hypothesis

<sup>8</sup> Note that in the Flanders, due to data limitations, only married couples—potentially the most traditional couples—are studied. The result might have been more conformed to other dual-earner countries if we could have included unmarried couples who are more dual-earners and have more egalitarian values in average.



2). However, women's unemployment also plays a significant role in some countries, contingent on the welfare state context. Job loss entails a higher risk of separation relative to economic inactivity in three of the four countries <sup>9</sup> for which it can be observed. The fact that the impact of women's job loss is significant in most egalitarian countries, such as Finland and France, is a sign that union stability is also linked to the dual-earner model (hypothesis 3). In countries where this model is the 'norm', the impact of labour market status on union stability is much similar for men and women. This result also shows that it is crucial to distinguish unemployment from inactivity, especially for women. Being inactive generally increases marital stability by an expected selection effect whereby women choose to be full-time homemakers, while the male partner specializes in market work (following a breadwinner model). These families are less likely to separate or divorce. The economic dependency on their partner might also be a reason for postponing separation or a greater reluctance to split up.

#### 5.2.2 Aggregate unemployment

Table 2 shows limited effects of aggregate unemployment which are country-specific. Higher divorce risks are observed in France and Italy (not always significant for both sexes<sup>10</sup>) during recession periods (hypothesis 4a), when unemployment is high. No significant effect is found in Finland. Decreasing risk of dissolution during a recession is observed in Belgium and Germany (hypothesis 4b). At first sight, these differences do not seem to be related to differences in the unemployment benefit system. However, the particularly long period of unemployment benefit entitlement in Belgium might be one reason why marital instability is less sensitive to recession in Belgium than elsewhere. However, the results are probably driven by country-specific cultural values and risk aversion level associated to work.

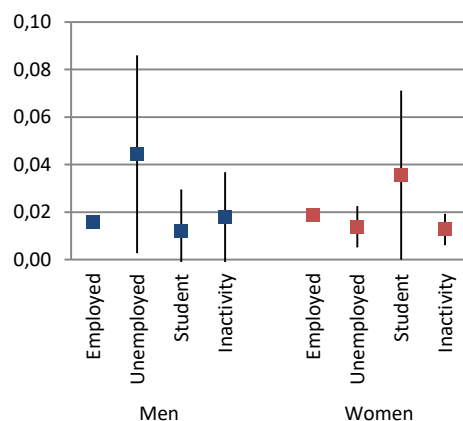
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9 Note that in Finland, where register data are used, the economically inactive category also includes those who are in fact unemployed but not registered as such, thus reflecting hidden unemployment. This might explain why there is no difference between unemployed and inactive women in that country.

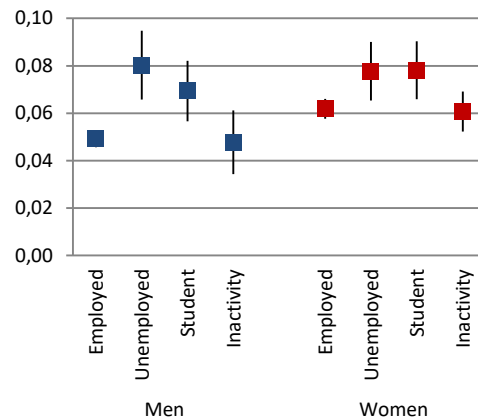
10 One would expect the macro-economic situation to affect both sexes similarly, but this is not always the case. There are two possible explanations for this result. First, the unemployment rate is sex-specific and differs in the two models. Second, the covariates are only included for the respondent, not the partner, and this might explain why the unemployment rate effects differ (since other covariates may play differently).

Figure 5: Predicted separation probabilities by employment status and gender

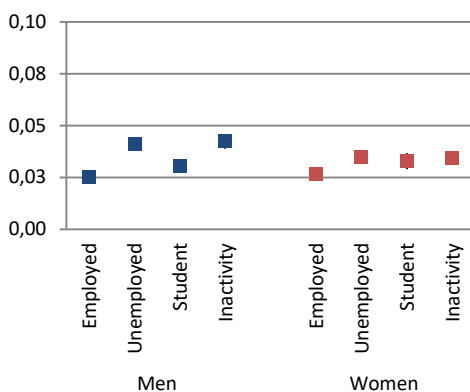
Belgium (Flanders)



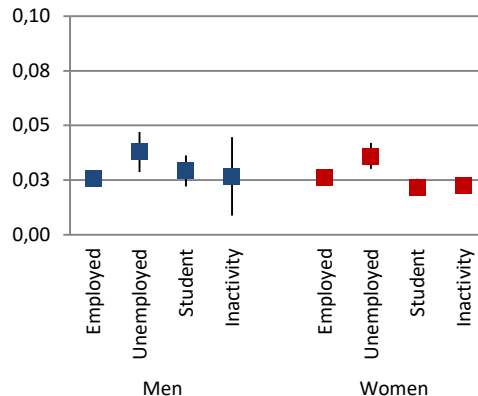
Germany



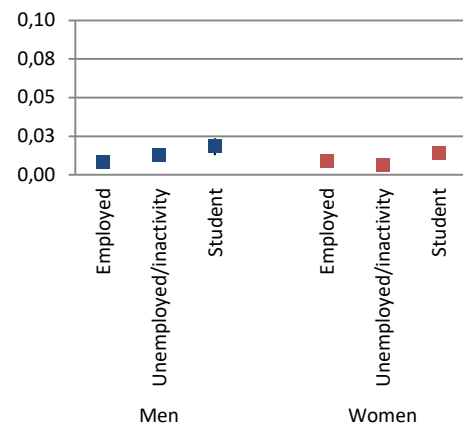
Finland



France



Italy



*Note:* Discrete time models controlled for union duration and duration squared, union cohort, union order, union type (married or not), age at union formation, educational level, number of children, presence of a child under three, and region (if necessary). The predicted probabilities are measured by fixing all other covariates at their mean. The full model results are reported in the Appendix (Tables A1 to A5).

### 5.2.3 Micro-macro interaction

Table 3 addresses the interaction variables and the differences in the individual effect of unemployment when it occurs in a period of economic growth or recession. For both men and women in Belgium and France, and for German men, a greater risk of union dissolution is observed when unemployment occurs during a period of growth than during a recession (hypothesis 5b). In these three countries, the individual effect of being unemployed seems weaker at times of high unemployment. However, as the difference is never significant for men, barely significant for women and not observed in Finland<sup>11</sup>, results appeal for further scrutiny. If confirmed, the magnitude of the effects could mean that there is less stigma associated with unemployment during a recession and unemployment consequently has fewer adverse effects<sup>12</sup>. On the contrary, people who are unemployed during a period of economic growth might have unobserved characteristics that negatively affect union stability.

Overall, men's individual unemployment has a consistent and positive effect on the risk of separation in all countries, and the macro-economic conditions do not substantially mitigate the association between unemployment and union dissolution. The social pressure on men's working status exists regardless of the economic context. For women, the effect of unemployment might be more sensitive to the economic context, as shows the stronger negative effect of unemployment on union stability observed during periods of growth in dual-earner countries such as France and Belgium.

*Table 3:* Interaction effects, discrete-time models of the dissolution risk for men (M) and women (F), odds ratios

	Flanders (BE)		Finland		France		Germany		Italy <sup>a</sup>	
	M	F	M	F	M	F	M	F	M	F
<b>Unemployed</b>										
<b>during growth</b>										
(low unemp. rate)	2.92***	1.15*	1.65***	1.26***	1.76**	1.91***	1.76***	1.31**	1.43***	0.78**
<b>during recession</b>										
(high unemp. rate)	2.60**	0.77	1.70***	1.38***	1.40**	1.16	1.63***	1.24	1.80***	0.89
Difference <sup>b</sup>	No	Yes	No	No	No	Yes	No	No	No	No
<b>Macro</b>										
(unemp. rate)	1.00	0.97***	1.01	1.01	1.03*	1.00	0.88***	0.96**	1.00	1.01**

*Note:* Discrete time event history models controlled for union duration and duration squared, union cohort, union order, union type (married or not), age at union formation, educational level, number of children, presence of a child under three, and region (if necessary). The full model results are reported in the Appendix (Tables A1 to A5). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>a</sup> for Italy, the data do not allow to disentangle unemployment from inactivity at the micro-level.

<sup>b</sup> test of significant difference at the 10% level.

11 For Italy, unemployed and non-employment cannot be distinguished.

12 Another possible interpretation is that, during recessions, both employed and unemployed persons are worried about the economic situation and are less confident in the future, so the effect of their individual work situation on the risk of union dissolution is negligible.

#### 5.2.4 Control variables

Overall, the coefficients on the control variables were as expected (see tables A1 to A5 in the Appendix) and very consistent across countries. Those who partnered at younger ages are more likely to separate (or divorce).<sup>13</sup> Couples who formed their unions in the most recent periods are more likely to separate than earlier union cohorts, even though the increase in the risk of divorce over cohorts is less pronounced for the most recent cohorts in Finland and France, countries where the divorce risk seems to be stabilising. First unions are always more stable than second and higher-order unions (except in Italy). In Italy, second and higher-order unions are less common than in other countries, and it is possible that individuals who choose to form a second or higher-order union (rather than having a more informal relationship, such as a Living Apart Together relationship) are more certain about their new union (and aware of the potential social condemnation in case of a new separation). Cohabitations dissolve at a higher rate than marriages in all countries where the risk can be compared. We found a higher risk of divorce for lower educated (and probably more disadvantaged populations) in all countries except France, where there is almost no educational gradient, and Italy, where the reverse is true: the highly educated (both men and women) are more likely to dissolve their unions than those with a low level of education, a result previously found by Vignoli and Ferro (2009). A lower risk of dissolution is found for couples with a very young child or a large number of children. Because of potential endogeneity of the parenthood variable, the association could not less be interpreted in causal terms than others variables as it might be due to selection: more stable couples are more likely to have one or more children.

## 6. Discussion and conclusion

The present analysis investigated the extent to which unemployment is associated with the risk of union dissolution at both the micro and the macro levels. Concerning the micro-effect, unemployment is positively associated with a higher union dissolution risk for men in all countries. The job loss of the main provider affects union stability. For women, the effect is weaker in all countries and, in some cases, is not significant, thus suggesting that men's employment status continues to play a more significant role than that of women. With the growing number of dual-earner couples, women's employment gained importance. This might explain why in Finland and France, two countries with high female labour force participation in which the dual-earner model predominates at least on the period of observation, unemployment of the female partner also has a clear separation-promoting effect. However, even in countries where there is evidence of more egalitarian expectations and attitudes to work, the magnitude of the effect differs by gender, and the male partner's unemployment has a more pronounced effect on dissolution risk than that of the female partner.

Unemployment effects at the macro level are not entirely consistent. The effect of macro level unemployment on separation rates is not always significant, and patterns vary

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<sup>13</sup> Except for women in Germany, but the effect is barely significant.

across countries: positive for France and Italy, negative in Belgium, and non-significant in Germany and Finland. We also interacted macro level unemployment and individual unemployment. These results suggest that male unemployment always increases the dissolution risk, whatever the macro-economic context. For women, things differ across countries. In dual-earner countries, such as Belgium and France, unions are more likely to be dissolved when women face unemployment during economic growth than during an economic recession, supporting among others a stigma mechanism.

This work has several limitations. First, due to data constraints, the Flanders sample only included first marriage partnerships, while the data for all other countries also included unmarried and higher-order unions. The Flanders limited sample selection may have been applied to the other four countries; however, keeping the sample comprehensiveness of all unions for most countries was considered a better option. Furthermore, as we did not expect unemployment to have different effects by marital status or union order, the results regarding the primary variable of interest have no reason to be affected by this selection. Jalovaara (2013) showed that unemployment increased dissolution rates in both types of unions. In Finland, only more recent union cohorts were available. However, we conducted a robustness check for the most recent marriage cohorts that were available for all countries (see Figure A1 in the Appendix). The results are very similar to those previously obtained on the whole population with a larger magnitude as the divorce risk increased over cohorts. One interesting exception is female unemployment in Germany, which turns out to significantly increase the risk of dissolution for most recent cohorts. This result indicates that convergence in the effect of female and male unemployment is observed for most recent cohorts who benefited from work-family improvements in welfare measures.

Second, due to the comparative aim of our research and the dynamic nature of the data, the covariates are limited or do not share the same level of precision. We adopt an intermediate position, balancing between precision and comparability when selecting covariates and samples. We are not able to control for household income dynamics, for instance.

Third, a potential concern when studying the impact of unemployment on marital dissolution relates to the characteristics that might affect both events. In our models, we control for several potential covariates, but this may not eliminate reverse causality, selection, and endogeneity issues. The reverse causality issue is partly resolved by the fact that we consider spells of unemployment lagged by one year. However, it is still possible that family problems leading to a divorce start well before the date of actual separation.

Fourth, interacting the micro and macro levels may give more insight into the magnitude of selection. The distinction between unemployment during an economic downturn or upturn is a way of limiting selection issues due to the specific characteristics of unemployed individuals. We argue that during periods of economic downturn, unemployed people are potentially less stigmatised and negatively selected than during periods of growth because unemployment is more widespread and can affect all working people. Moreover, endogeneity issues cannot be completely ruled out, as in most studies on marital separation, as unobserved characteristics may explain problems in both the workplace and the private sphere. However, during recessions, unobserved characteristics that explain marital disruption are more likely to be independent of the characteristics that

explain the job loss. During growth periods, the negative selection of unemployed people may be stronger, because people who do not find a job or have been laid-off are more likely to also have negative outcomes on the labour market, which may affect marital stability as well. Therefore, the interpretation of the interaction of unemployment during growth periods is more prone to potential selection bias due to unobserved individual characteristics and calls for more precaution that unemployment during a recession. This is also the reason why some studies (Charles & Stevens 2004) defined different categories of unemployment according to the source of job loss (individual layoff or plant closure), assuming that plant closure is less related to individual unobserved characteristics.

Finally, the fact that macro-unemployment effects seem to be more country-specific than individual unemployment effects calls for further research to explain the micro-macro paradox of unemployment on dissolution risk. This paradox mainly observed in the US, seems to be less pronounced in the European context, where the cost of separation may be offset by a more generous welfare system. Beyond the country-specific welfare contexts, this result may also mean that the way unemployed individuals are judged varies according to the norms and values attached to job loss and the importance of work. Confidence in the future and economic recovery (i.e., the level of pessimism) may also differ significantly. This work is a first step that calls for further comparative studies and data to fully understand the link between economic conditions and union dissolution in a cross-national context.

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## Appendix

Table A.1: Discrete time model, full results by country: Belgium (Flanders)

VARIABLES	MEN		WOMEN	
	(1) Odds ratio(se)	(2) Odds ratio(se)	(1) Odds ratio(se)	(2) Odds ratio(se)
Union duration	1.329*** (0.022)	1.329*** (0.023)	1.174*** (0.021)	1.176*** (0.021)
Union duration squared	0.991*** (0.000)	0.991*** (0.000)	0.994*** (0.001)	0.994*** (0.0001)
Age at union formation	0.938*** (0.007)	0.938*** (0.007)	0.915*** (0.012)	0.915*** (0.012)
Union cohort (ref=1975-84)				
1985-94	3.771*** (0.356)	3.763*** (0.356)	2.102*** (0.233)	2.103*** (0.232)
1995-04	8.191*** (1.733)	8.187*** (1.728)	3.546*** (0.926)	3.563*** (0.927)
Education (ref=low)				
Medium	1.039 (0.066)	1.039 (0.066)	0.928 (0.055)	0.929 (0.055)
High	0.805*** (0.056)	0.806*** (0.056)	0.758*** (0.055)	0.759*** (0.055)
# of children (ref=0)				
1	0.363*** (0.029)	0.364*** (0.029)	0.847** (0.067)	0.847** (0.066)
2	0.151*** (0.016)	0.151*** (0.016)	0.564*** (0.049)	0.563*** (0.049)
3 +	0.231*** (0.028)	0.231*** (0.028)	0.647*** (0.094)	0.646*** (0.094)
Child under 3 (ref=no)	0.739*** (0.071)	0.738*** (0.071)	0.716*** (0.068)	0.716*** (0.068)
Employment status (ref= in job)				
Unemployed	2.566*** (0.527)		1.026 (0.090)	
Unemp. during recession		2.604** (1.240)		0.768 (0.140)
Unemp. during growth		2.922*** (0.763)		1.152* (0.091)
Student	1.221 (0.401)	1.220 (0.400)	0.950 (0.254)	0.947 (0.253)
Inactivity	0.981 (0.121)	0.978 (0.120)	0.600*** (0.0466)	0.599*** (0.047)
Unemployment rate	1.004 (0.020)	1.004 (0.022)	0.969*** (0.010)	0.971*** (0.010)
Constant	0.009*** (0.003)	0.009*** (0.002)	0.044*** (0.017)	0.043*** (0.017)
Observations	45,365	45,365	51,808	51,808
Events	410	410	488	488

Robust standard errors in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.2: Discrete time model, full results by country: Finland

VARIABLES	MEN		WOMEN	
	(1) Odds ratio(se)	(2) Odds ratio(se)	(1) Odds ratio(se)	(2) Odds ratio(se)
Union duration	1.252*** (0.052)	1.252*** (0.052)	1.219*** (0.051)	1.219*** (0.051)
Union duration squared	0.988*** (0.002)	0.988*** (0.002)	0.990*** (0.002)	0.990*** (0.002)
Age at union formation	0.965*** (0.002)	0.965*** (0.002)	0.974*** (0.003)	0.974*** (0.003)
Union cohort (ref=1990-97)				
1998-05	1.275* (0.184)	1.276* (0.185)	1.199 (0.177)	1.201 (0.178)
2006-12	1.318 (0.262)	1.319 (0.263)	1.253 (0.284)	1.256 (0.287)
Union order 2+ (ref=1)	1.521*** (0.072)	1.521*** (0.072)	1.448*** (0.072)	1.449*** (0.072)
Married (ref=no)	0.430*** (0.013)	0.430*** (0.012)	0.433*** (0.012)	0.433*** (0.012)
Education (ref=low)				
Secondary	0.887*** (0.013)	0.887*** (0.013)	0.883*** (0.016)	0.883*** (0.016)
Tertiary	0.756*** (0.019)	0.755*** (0.019)	0.790*** (0.028)	0.790*** (0.028)
# of children (ref=0)				
1	0.871*** (0.023)	0.871*** (0.023)	0.838*** (0.018)	0.838*** (0.018)
2	0.819*** (0.027)	0.820*** (0.027)	0.750*** (0.021)	0.750*** (0.021)
3 +	0.813*** (0.037)	0.813*** (0.037)	0.694*** (0.028)	0.694*** (0.028)
Child under 3 (ref=no)	0.721*** (0.034)	0.720*** (0.035)	0.722*** (0.031)	0.721*** (0.032)
Employment status(ref= in job)				
Unemployed	1.682*** (0.04)		1.332*** (0.026)	
Unemp. during recession		1.701*** (0.061)		1.377*** (0.035)
Unemp. during growth		1.654*** (0.068)		1.257*** (0.051)
Student	1.227*** (0.050)	1.229*** (0.049)	1.241*** (0.038)	1.246*** (0.038)
Inactivity	1.730*** (0.044)	1.730*** (0.044)	1.299*** (0.031)	1.298*** (0.031)
Unemployment rate	1.013 (0.012)	1.110 (0.012)	1.009 (0.017)	1.008 (0.017)
Constant	0.074*** (0.029)	0.074*** (0.029)	0.065*** (0.035)	0.066*** (0.035)
Observations	2,404,777	2,404,777	2,477,444	2,477,444
Events	70,675	70,675	78,104	78,104

Robust standard errors in parentheses.

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Table A.3: Discrete time model, full results by country: France

VARIABLES	MEN		WOMEN	
	(1) Odds ratio(se)	(2) Odds ratio(se)	(1) Odds ratio(se)	(2) Odds ratio(se)
Union duration	1.123*** (0.025)	1.123*** (0.025)	1.109*** (0.022)	1.107*** (0.022)
Union duration squared	0.995*** (0.001)	0.995*** (0.001)	0.996*** (0.001)	0.996*** (0.001)
Age at union formation	0.947*** (0.014)	0.946*** (0.014)	0.943*** (0.010)	0.942*** (0.010)
Union cohort (ref=1975-84)				
1985-94	0.832** (0.070)	0.833** (0.070)	1.067 (0.077)	1.070 (0.077)
1995-04	1.098 (0.140)	1.100 (0.140)	1.741*** (0.136)	1.740*** (0.137)
Union order 2+ (ref=1)	2.205*** (0.183)	2.203*** (0.183)	2.020*** (0.144)	2.016*** (0.143)
Married (ref=no)	0.362*** (0.026)	0.362*** (0.026)	0.411*** (0.029)	0.411*** (0.029)
Education (ref=low)				
Medium	1.029 (0.090)	1.029 (0.090)	0.983 (0.064)	0.980 (0.064)
High	1.131 (0.086)	1.131 (0.086)	1.046 (0.063)	1.044 (0.063)
# of children (ref=0)				
1	0.688*** (0.071)	0.689*** (0.071)	0.853 (0.084)	0.852 (0.084)
2	0.526*** (0.074)	0.527*** (0.074)	0.690*** (0.071)	0.686*** (0.071)
3 +	0.535*** (0.091)	0.535*** (0.091)	0.832 (0.098)	0.827 (0.097)
Child under 3 (ref=no)	0.641*** (0.062)	0.640*** (0.062)	0.717*** (0.056)	0.722*** (0.057)
Employment status (ref= in job)				
Unemployed	1.506*** (0.204)		1.393*** (0.136)	
Unemp. during recession		1.284 (0.211)		1.062 (0.147)
Unemp. during growth		1.779*** (0.374)		1.753*** (0.211)
Student	1.145 (0.151)	1.136 (0.150)	0.823** (0.076)	0.805** (0.074)
Inactivity	1.046 (0.377)	1.046 (0.378)	0.855** (0.059)	0.857** (0.059)
Unemployment rate	1.027** (0.014)	1.028** (0.014)	1.003 (0.007)	1.006 (0.007)
Constant	0.109*** (0.045)	0.109*** (0.045)	0.102*** (0.033)	0.101*** (0.033)
Observations	48,658	48,658	63,110	63,110
Events	1,301	1,301	1,389	1,389

Robust standard errors in parentheses.

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Table A.4: Discrete time model, full results by country: Germany

VARIABLES	MEN		WOMEN	
	(1) Odds ratio(se)	(2) Odds ratio(se)	(1) Odds ratio(se)	(2) Odds ratio(se)
Union duration	0.804 *** (0.019)	0.804 *** (0.019)	0.796 *** (0.016)	0.796 (0.016)
Union duration squared	1.007 *** (0.001)	1.007 *** (0.001)	1.007 *** (0.001)	1.007 (0.001)
Age at union formation	0.997 (0.003)	0.997 (0.003)	1.007 (0.003)	1.007 (0.003)
Union cohort (1995-2013) (ref=1985-94)	1.390 *** (0.103)	1.388 *** (0.103)	1.996 *** (0.117)	1.995 (0.117)
Union order 2+ (ref=1)	0.841 (0.078)	0.841 (0.078)	0.994 (0.074)	0.993 (0.074)
Married (ref=no)	0.303 *** (0.028)	0.303 *** (0.028)	0.300 *** (0.024)	0.300 (0.024)
Education (ref=low)				
Vocational	0.958 (0.085)	0.957 (0.085)	0.748 *** (0.053)	0.747 (0.053)
College/University	0.850 (0.100)	0.850 (0.100)	0.609 *** (0.066)	0.609 (0.066)
Child under 3 (ref=no)	0.363 *** (0.062)	0.363 *** (0.062)	0.442 *** (0.054)	0.442 (0.054)
# of children (ref=0)				
1	0.594 *** (0.063)	0.594 *** (0.063)	0.784 (0.062)	0.785 (0.062)
2	0.521 *** (0.077)	0.521 *** (0.077)	0.843 (0.075)	0.842 (0.075)
3 +	0.619 * (0.136)	0.621 * (0.136)	0.863 (0.099)	0.863 (0.099)
Unemployed	1.719 *** (0.187)		1.281 * (0.124)	
Unemp. during recession		1.760 *** (0.227)		1.309 * (0.165)
Unemp. during growth		1.629 * (0.323)		1.244 (0.180)
Student	1.456 *** (0.166)	1.455 *** (0.166)	1.288 * (0.128)	1.288 * (0.128)
Inactivity	0.969 (0.156)	0.969 (0.156)	0.981 (0.084)	0.981 (0.084)
Unemployment rate	0.882 *** (0.016)	0.881 *** (0.016)	0.963 ** (0.013)	0.963 ** (0.013)
Constant	0.334 *** (0.084)	0.338 *** (0.086)	0.222 *** (0.040)	0.223 *** (0.041)
Observations	19,881	19,881	20,691	20691
Events	1,052	1,052	1,339	1,339

Note: Controlled for migration status and region (East/West Germany).

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.5: Discrete time model, full results by country: Italy

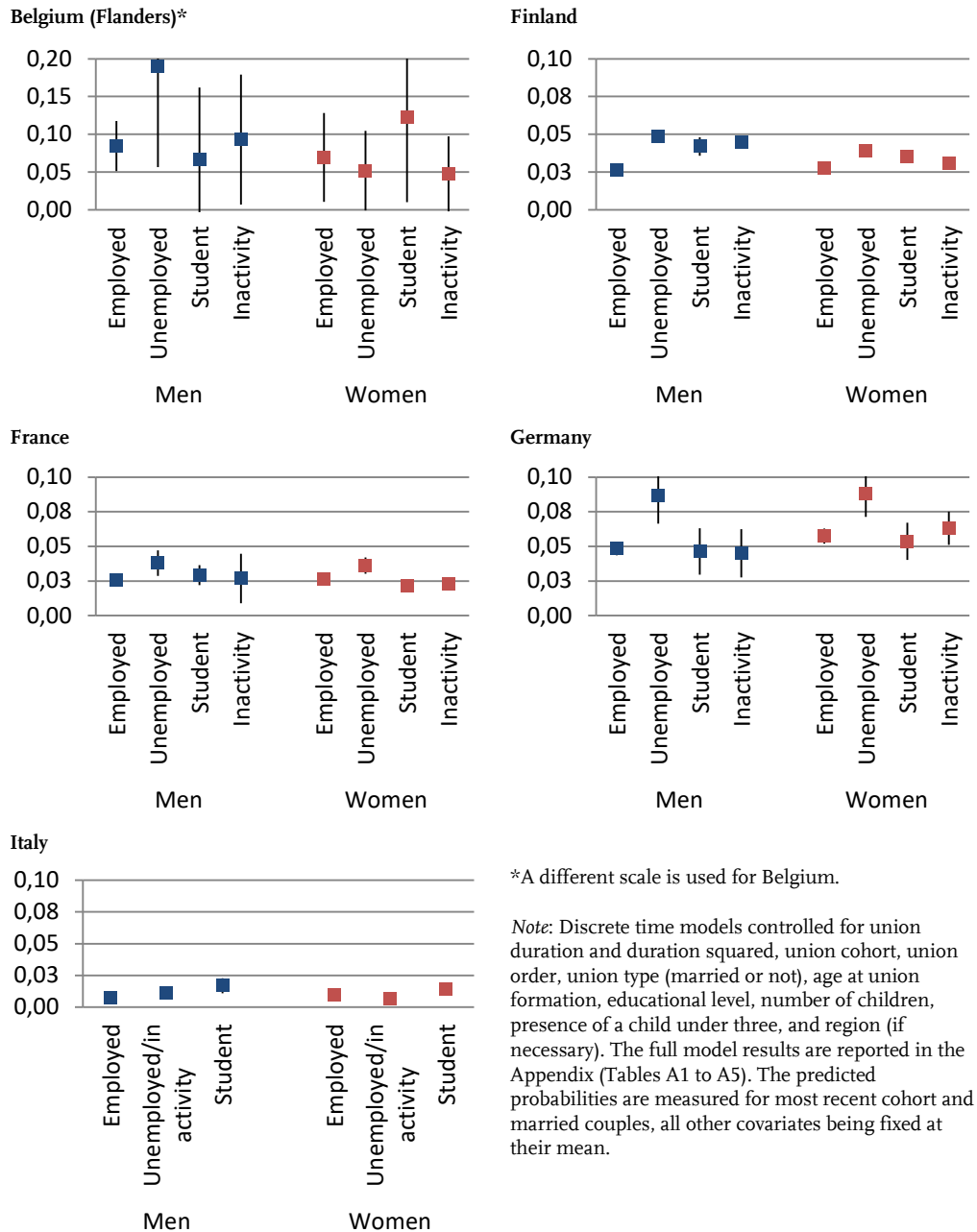
VARIABLES	MEN		WOMEN	
	(1) Odds ratio(se)	(2) Odds ratio(se)	(1) Odds ratio(se)	(2) Odds ratio(se)
Union duration	0.985 (0.016)	0.984 (0.016)	1.005 (0.017)	1.005 (0.017)
Union duration squared	1.000 (0.001)	1.000 (0.001)	0.999** (0.001)	0.999* (0.001)
Age at union formation	0.966*** (0.005)	0.967*** (0.005)	0.970*** (0.006)	0.969*** (0.006)
Union cohort (ref=1975-84)				
1985-94	1.268*** (0.081)	1.271*** (0.081)	1.503*** (0.079)	1.507*** (0.079)
1995-2008	1.568*** (0.087)	1.581*** (0.087)	1.501*** (0.090)	1.508*** (0.090)
Union order 2+ (ref=1)	0.904 (0.103)	0.907 (0.103)	0.733*** (0.119)	0.734*** (0.119)
Married (ref=no)	0.163*** (0.074)	0.164*** (0.074)	0.184*** (0.077)	0.184*** (0.077)
Education (ref=low)				
Medium	1.282*** (0.066)	1.279*** (0.066)	1.233*** (0.069)	1.233*** (0.069)
High	1.602*** (0.087)	1.593*** (0.087)	1.437*** (0.090)	1.434*** (0.090)
# of children (ref=0)				
1	0.486*** (0.090)	0.486*** (0.090)	0.730*** (0.087)	0.730*** (0.087)
2	0.444*** (0.157)	0.444*** (0.157)	0.641*** (0.149)	0.641*** (0.149)
3 +	0.471*** (0.154)	0.469*** (0.155)	0.688** (0.151)	0.688** (0.151)
Child under 3 (ref=no)	0.776*** (0.118)	0.776*** (0.118)	0.821** (0.105)	0.821** (0.105)
Employment status(ref= in job)				
Unemployed	1.646*** (0.080)		0.845** (0.066)	
Unemp. during recession		1.367* (0.190)		0.877 (0.081)
Unemp. during growth		1.426*** (0.125)		0.801** (0.096)
Unemployment rate	1.058 (0.007)	1.005 (0.007)	1.018*** (0.001)	1.020*** (0.006)
South region	0.799** (0.101)	0.792*** (0.102)	0.589*** (0.099)	0.601*** (0.103)
Centre region	1.086 (0.079)	1.080 (0.079)	0.930 (0.079)	0.931 (0.079)
Constant	-1.949*** (0.192)	-1.983*** (0.195)	-2.430*** (0.199)	-2.435*** (0.199)
Observations	135,752	135,752	141,370	141,370
Events	1,202	1,202	1,169	1,169

Note: Controlled for region (South/Centre/North Italy).

Robust standard errors in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure A.1: Divorce predicted probabilities for the most recent cohort of married couples



## Information in German

### Deutscher Titel

Arbeitslosigkeit und Trennungsverhalten: Ergebnisse eines europäischen Fünf-Länder Vergleichs

### Zusammenfassung

Seit der 1970er Jahren zeichnen sich viele europäische Länder durch hohe Trennungsraten wie auch hohe Arbeitslosenquoten aus. Bislang ist jedoch unklar, in welchem Zusammenhang ökonomische Entwicklungen und die Stabilität von Partnerschaften stehen. Dieser Beitrag befasst sich damit, wie Arbeitslosigkeit, gemessen auf der Mikro- und Makroebene, das Trennungsrisiko in fünf europäischen Ländern in der Zeit vor der Finanz- und Wirtschaftskrise beeinflusst hat. Auf Basis umfassender Längsschnittdaten aus Belgien, Finnland, Frankreich, Deutschland und Italien zeigen die empirischen Analysen, in der diskrete Zeitmodelle verwendet werden, dass Arbeitslosigkeit in allen Ländern das Trennungsrisiko prinzipiell erhöht. Während sich vor allem auf der Mikroebene zeigt, dass die individuelle Arbeitslosigkeitserfahrung des Mannes einen positiven Einfluss auf das Trennungsrisiko ausübt, ergeben sich jedoch keine statistisch signifikanten Zusammenhänge auf der Makroebene. Der Einfluss der Arbeitslosigkeit der Frau ist weniger stark ausgeprägt als jene des Mannes und variiert deutlich zwischen den Ländern. In Deutschland und Italien, wo bis vor kurzem Familie und Erwerbstätigkeit wenig vereinbar waren, gibt es keinen statistisch signifikanten Zusammenhang von weiblicher Arbeitslosigkeit und Trennungsraten.

**Schlagwörter:** Arbeitslosigkeit, Scheidung, Trennung, Kontexteffekte, Geschlecht, Paar, Krise



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